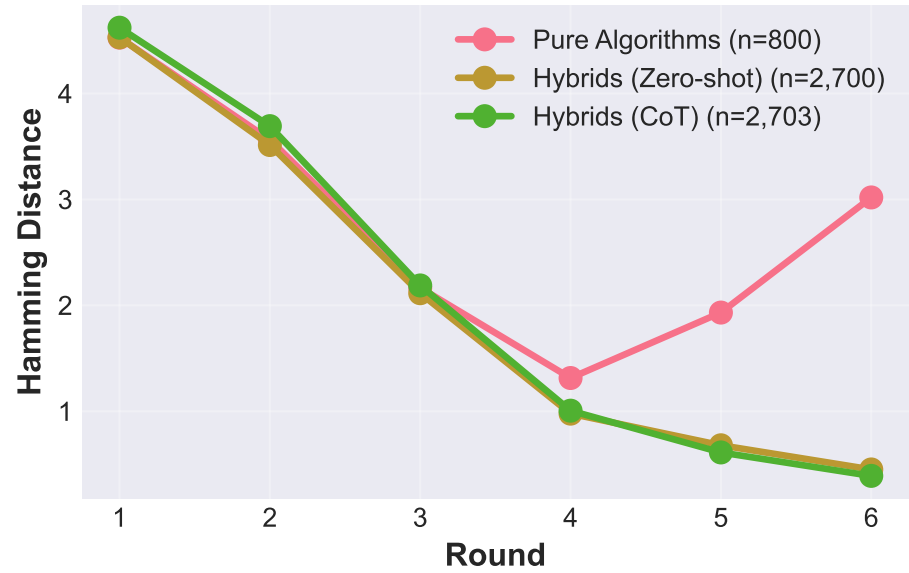
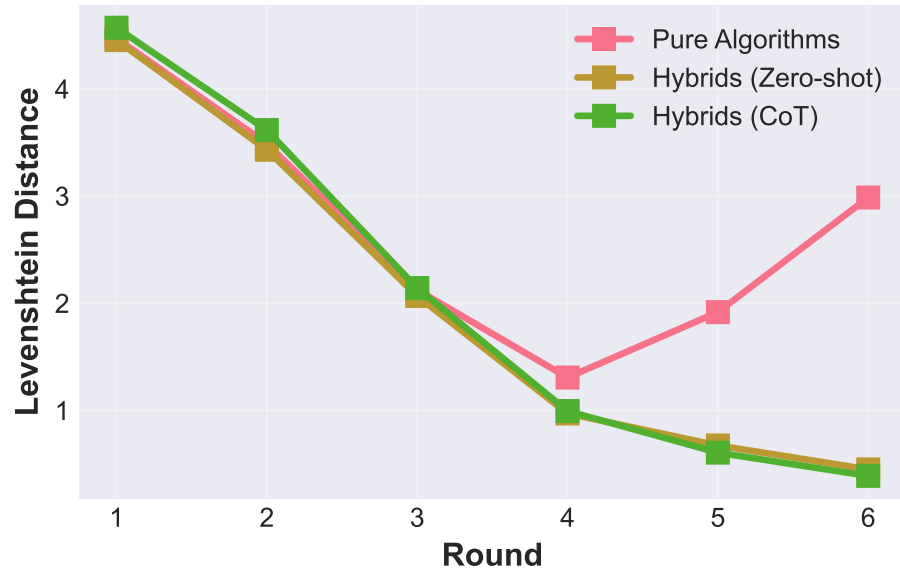


Convergence Patterns and Search Space Pruning Analysis:  
Iterative Reasoning Ability in LLMs vs Algorithms

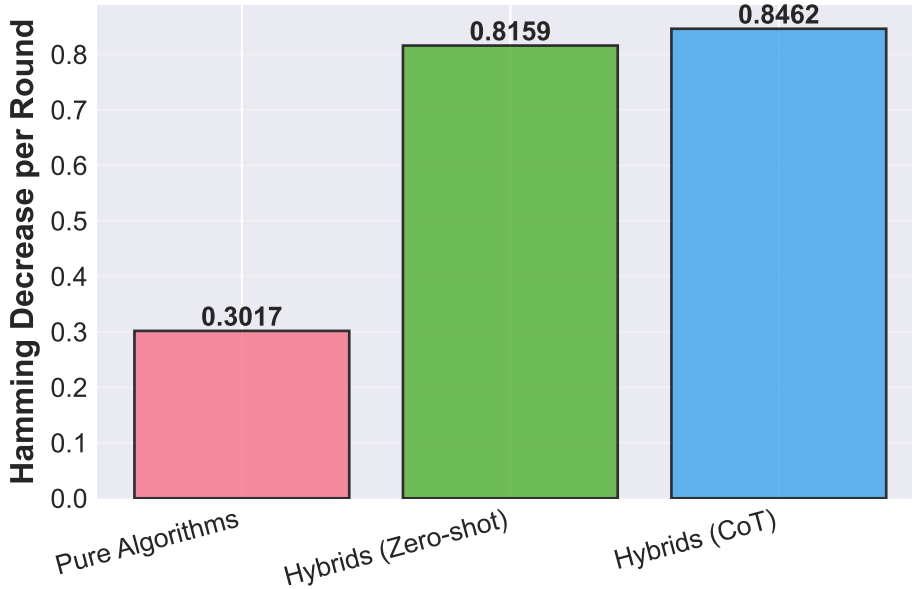
A. Convergence: Hamming Distance by Round



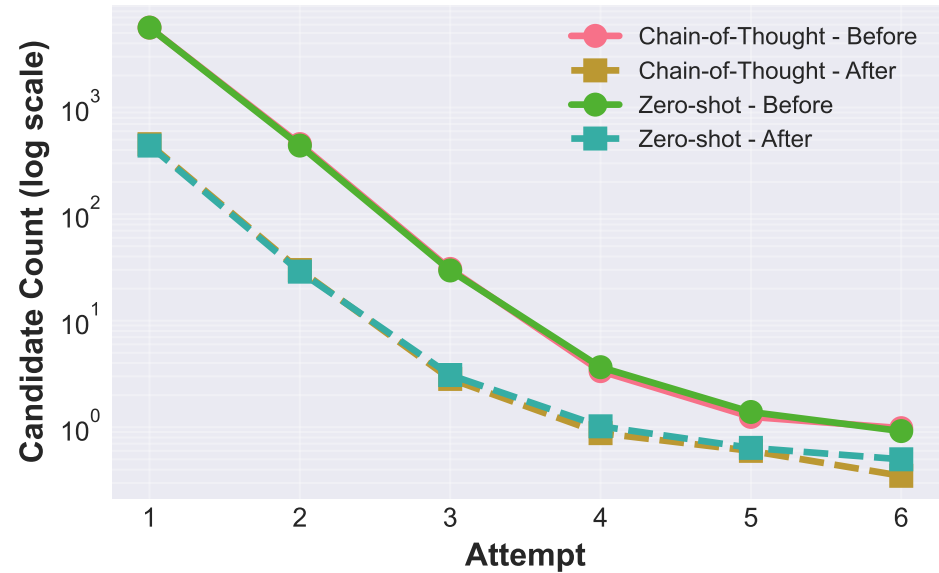
B. Convergence: Levenshtein Distance by Round



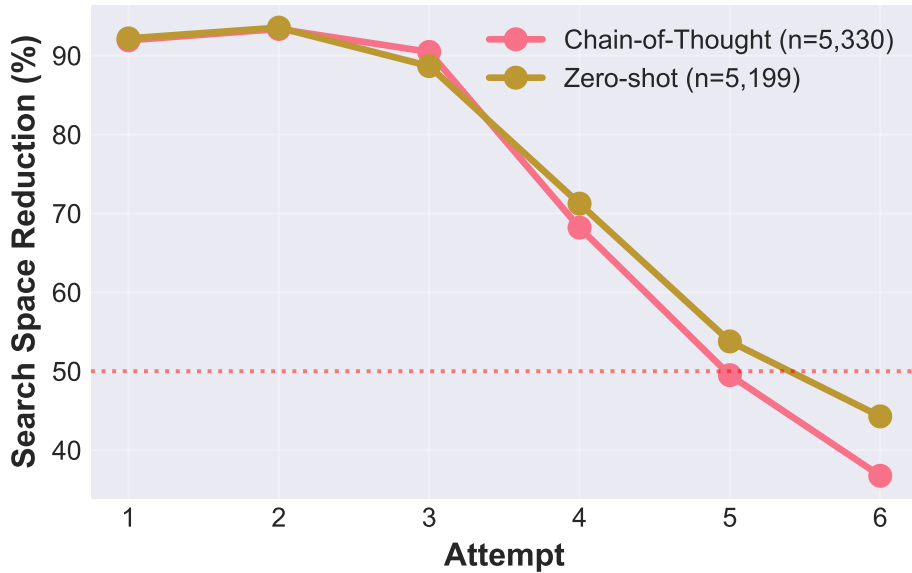
C. Convergence Rate Comparison



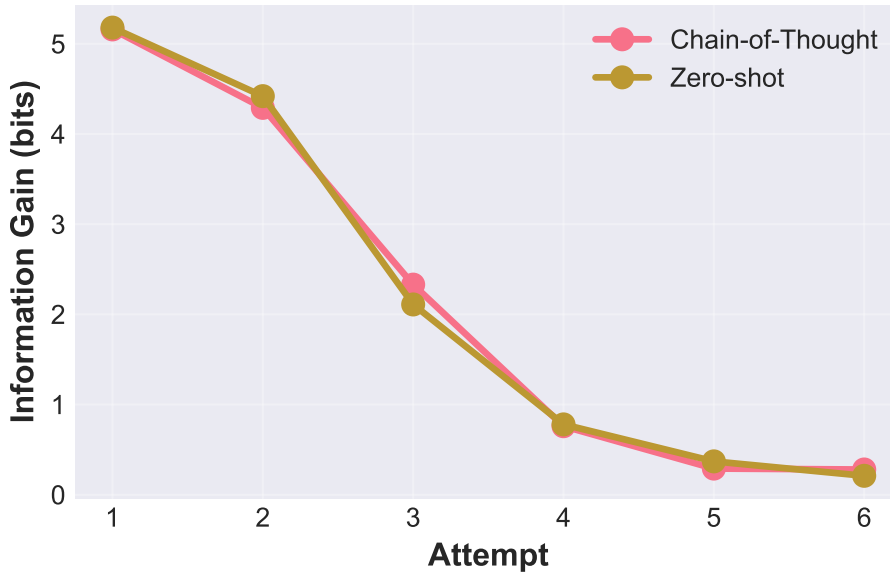
D. Search Space Reduction (Pure LLMs)



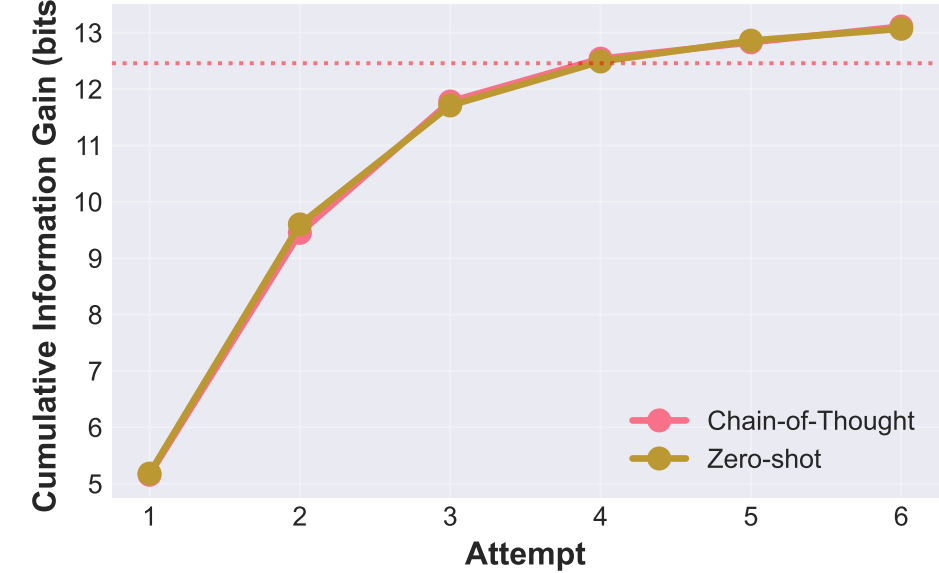
E. Pruning Efficiency by Attempt



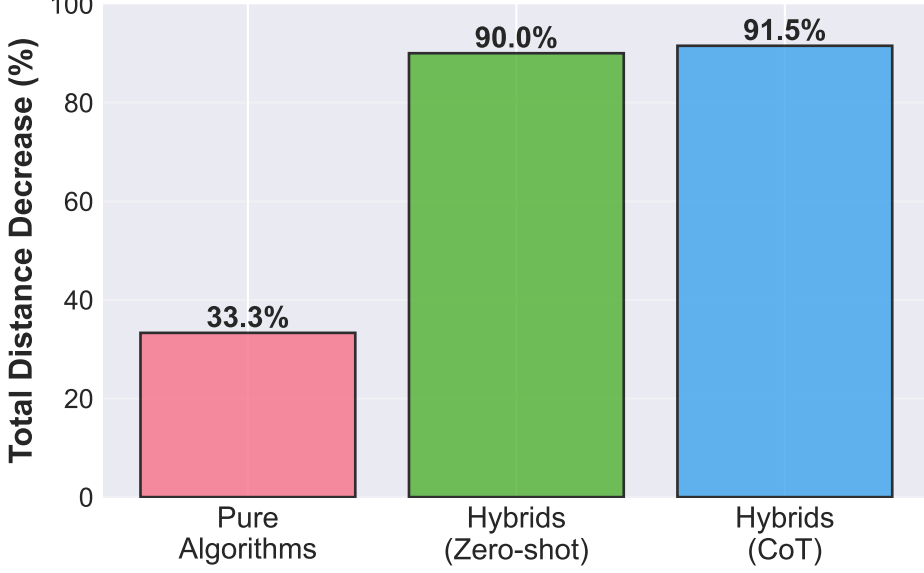
F. Information Gain per Attempt



G. Cumulative Information Gain



H. Total Convergence Efficiency



I. Relative Performance (Algorithm = 100%)

